

## **ABSTRACT**

A chimeric LL2 monoclonal antibody (mAb) is described in which the variable regions of the murine LL2 mAb are recombinantly joined to the human constant region domains, which retains the immunospecificity and B-cell lymphoma and leukemia cell internalization capacity of the murine LL2 (mAb), and which exhibits reduced human anti-mouse antibody production activity (HAMA). A humanized LL2 mAb is described in which the CDRs are recombinantly joined to a framework sequence of human variable regions, and subsequently linked to human constant region domains, which retains the immunospecificity and B-lymphoma and leukemia cell internalization capacities of the murine and chimeric LL2 mABs, and has the potential for exhibiting reduced HAMA. Isolated DNAs encoding the LL2 variable and CDR framework regions are described. Conjugates of chimeric and humanized chimeric LL2 antibodies with cytotoxic agents or labels find use in therapy and diagnosis of B-cell lymphomas and leukemias.